FIG.1

104 IMAGE PROCESSING APPARATUS

110 — DEFECT CANDIDATE EXTRACTOR

109 — COMPARATOR

106 — BRIGHTNESS CORRECTION

105 — POSITIONAL SHIFT 1

111 — DEFECT CANDIDATE CLASSIFIER

108 — IMAGE INFORMATION STORAGE MEMORY

107 — IMAGE INFORMATION ACCUMULATION CONTROLLER

120 — OUTPUT UNIT

113 — SEQUENCE CONTROL DEVICE

112

103

102   100

101

FIG.2

104 IMAGE PROCESSING APPARATUS

110 — DEFECT CANDIDATE EXTRACTOR

109 — COMPARATOR

106 — BRIGHTNESS CORRECTION

105 — POSITIONAL SHIFT 1

111 — DEFECT CANDIDATE CLASSIFIER

202 — FEATURE AMOUNT STORAGE MEMORY

202 — FEATURE AMOUNT EXTRACTOR

201 — FEATURE AMOUNT STORAGE CONTROLLER

120 — OUTPUT UNIT

113 — SEQUENCE CONTROL DEVICE

112

103

102   100

101

FIG.3 (a)   FIG.3 (b)   FIG.3 (c)

303 DEFECT

304

305

301 INSPECTION
IMAGE

302 COMPARISON
IMAGE

306 DIFFERENTIAL
IMAGE

FIG.3 (d)

310   308

311   309

307 ACCUMULATED
DIFFERENTIAL IMAGE

FIG.4 (a)   FIG.4 (b)

403 GAUSSIAN DISTRIBUTION
APPROXIMATION

404 LARGE BRIGHTNESS
DIFFERENTIAL PART
BRIGHTNESS DIFFERENTIAL

FREQUENCY

401 DISPERSION MAP   402 BRIGHTNESS DIFFERENTIAL
FREQUENCY DISTRIBUTION
CORRESPONDING TO 309

FIG.5 (a)

FIG.5 (b)

501 GOLDEN PATTERN

504 LARGE BRIGHTNESS DIFFERENTIAL PART

503 GAUSSIAN DISTRIBUTION APPROXIMATION

REFERENCE BRIGHTNESS

502 FREQUENCY DISTRIBUTION WITH RESPECT TO REFERENCE BRIGHTNESS

FIG.5 (c)

506 GAUSSIAN DISTRIBUTION APPROXIMATION

504 LARGE BRIGHTNESS DIFFERENTIAL PART

INSPECTION BRIGHTNESS

DISPERSION

REFERENCE IMAGE FEATURE

505 FEATURE SPACE FREQUENCY DISTRIBUTION

FIG.6

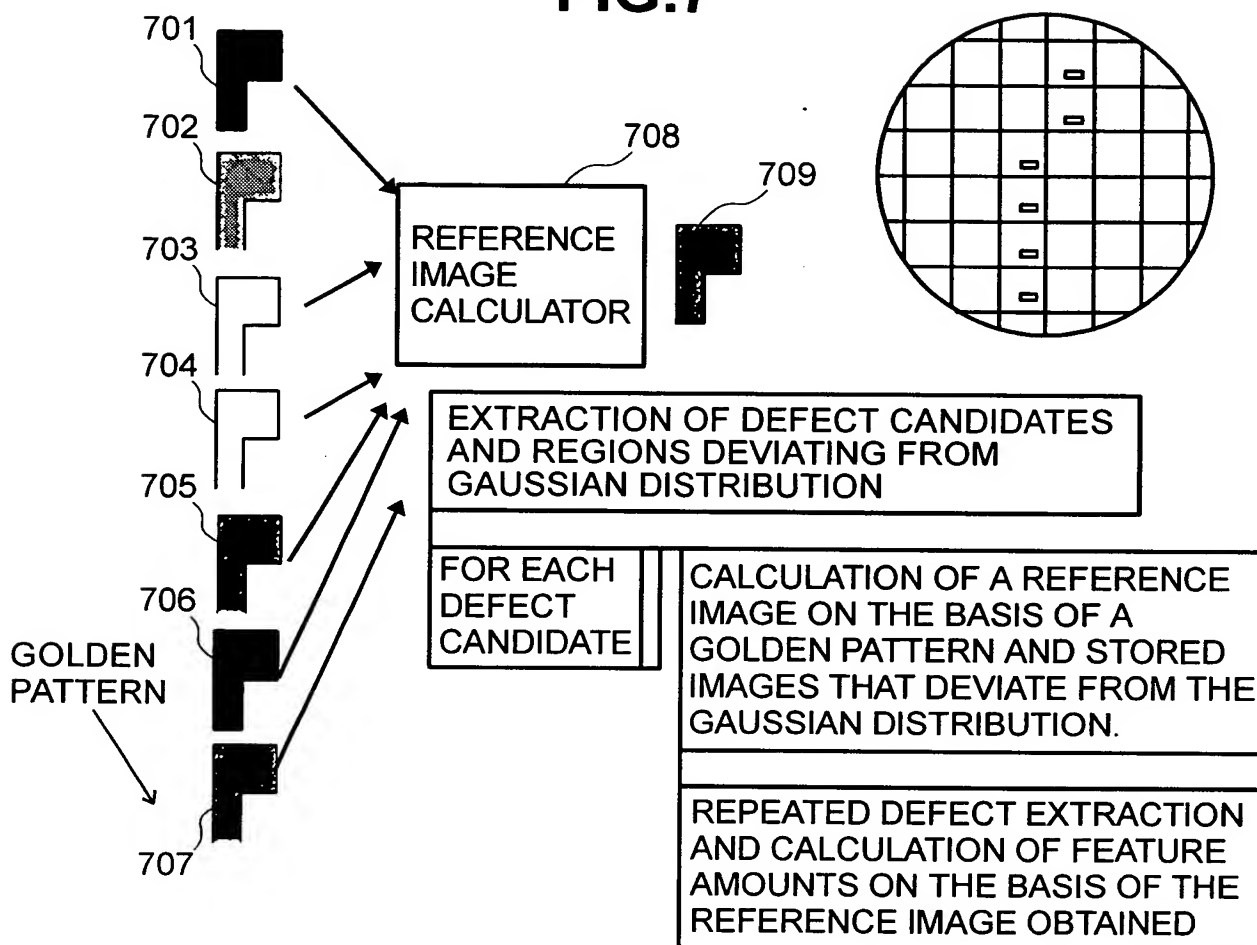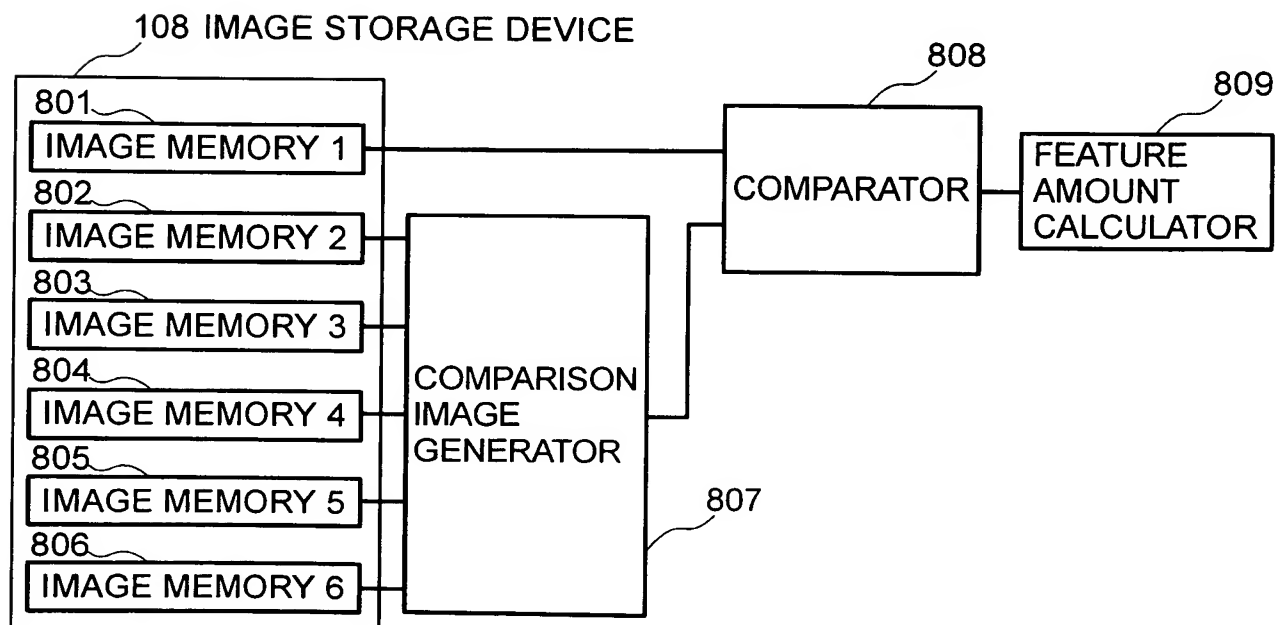| EXTRACTION OF DEFECT CANDIDATES AND LARGE DIFFERENTIAL IMAGE REGIONS.		
	SETTING OF GROUPING REGIONS PRODUCED BY GROUPING NEIGHBORING REGIONS ACCORDING TO DEFECT CANDIDATES AND LARGE DIFFERENTIAL IMAGE REGIONS.	
FOR EACH DEFECT CANDIDATE	CALCULATION OF FEATURE AMOUNTS ON THE BASIS OF DIFFERENTIAL IMAGE BRIGHTNESS CORRECTED ACCORDING TO THE DISTRIBUTION OF THE DIFFERENTIAL IMAGE BRIGHTNESS OF THE GROUPING REGIONS TO WHICH THE DEFECT CANDIDATES BELONG.	
	USING CALCULATED FEATURE AMOUNTS TO DETERMINE WHETHER THE DEFECT CANDIDATES ARE ACTUAL DEFECTS.	

FIG.7

701

702

708

709

703

REFERENCE
IMAGE
CALCULATOR

704

EXTRACTION OF DEFECT CANDIDATES
AND REGIONS DEVIATING FROM
GAUSSIAN DISTRIBUTION

705

FOR EACH
DEFECT
CANDIDATE

CALCULATION OF A REFERENCE
IMAGE ON THE BASIS OF A
GOLDEN PATTERN AND STORED
IMAGES THAT DEVIATE FROM THE
GAUSSIAN DISTRIBUTION.

706

GOLDEN
PATTERN

REPEATED DEFECT EXTRACTION
AND CALCULATION OF FEATURE
AMOUNTS ON THE BASIS OF THE
REFERENCE IMAGE OBTAINED

707

FIG.8

108 IMAGE STORAGE DEVICE

808

809

801

IMAGE MEMORY 1

COMPARATOR

FEATURE
AMOUNT
CALCULATOR

802

IMAGE MEMORY 2

803

IMAGE MEMORY 3

804

IMAGE MEMORY 4

COMPARISON
IMAGE
GENERATOR

805

IMAGE MEMORY 5

806

IMAGE MEMORY 6

807

FIG.9

901 DIFFERENTIAL IMAGE FEATURE

903 INSPECTION IMAGE FEATURE

905 LARGE DIFFERENTIAL IMAGE REGION DISTRIBUTION

902 GOLDEN PATTERN FEATURE

IMAGE FEATURE SPACE

904 SCATTER DISTRIBUTION

FIG.10